

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(PTO-1449)

ATTY. DOCKET NO.
005199 USA/
Consilium/Consilium

SERIAL NO.
09/725,908

APPLICANT
Yuehshian T. CHI et al.


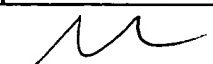
FILING DATE
November 30, 2000

GROUP
2141

U.S. PATENT DOCUMENTS

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<p style="text-align: center;">INFORMATION DISCLOSURE CITATION IN AN APPLICATION</p> <p style="text-align: center;">(PTO-1449)</p> 		<p>ATTY. DOCKET NO. 005199 USA/ Consilium/Consilium</p>	<p>SERIAL NO. 09/725,908</p>
		<p>APPLICANT Yuehshian T. CHI et al.</p>	
		<p>FILING DATE November 30, 2000</p>	<p>GROUP 2141</p>
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)			
✓	IslamRaja, M. M., C. Chang, J. P. McVittie, M. A. Cappelli, and K. C. Saraswat. May/June 1993. "Two Precursor Model for Low-Pressure Chemical Vapor Deposition of Silicon Dioxide from Tetraethylorthosilicate." <i>J. Vac. Sci. Technol. B</i> , Vol. 11, No. 3, pp. 720-726.		
✓	Kim, Eui Jung and William N. Gill. July 1994. "Analytical Model for Chemical Vapor Deposition of SiO ₂ Films Using Tetraethoxysilane and Ozone" (Abstract). <i>Journal of Crystal Growth</i> , Vol. 140, Issues 3-4, pp. 315-326.		
✓	Guo, R.S, A. Chen, C.L. Tseng, I.K. Fong, A. Yang, C.L. Lee, C.H. Wu, S. Lin, S.J. Huang, Y.C. Lee, S.G. Chang, and M.Y. Lee. June 16-17, 1998. "A Real-Time Equipment Monitoring and Fault Detection System." <i>Semiconductor Manufacturing Technology Workshop</i> , pp. 111-121.		
✓	Lantz, Mikkel. 1999. "Equipment and APC Integration at AMD with Workstream." <i>IEEE</i> , pp. 325-327.		
✓	July 15, 2004. Office Action for U.S. Serial No. 10/172,977, filed June 18, 2002.		
✓	August 2, 2004. Office Action for U.S. Serial No. 10/174,377, filed June 18, 2002.		
✓	August 9, 2004. Written Opinion for PCT Serial No. PCT/US02/19063.		
✓	August 18, 2004. International Preliminary Examination Report for PCT Serial No. PCT/US02/19116.		
✓	August 24, 2004. Office Action for U.S. Serial No. 10/135,405, filed May 1, 2002.		
✓	August 25, 2004. Office Action for U.S. Serial No. 09/998,384, filed November 30, 2001.		
✓	September 9, 2004. Written Opinion for PCT Serial No. PCT/US02/21942.		
✓	September 16, 2004. International Preliminary Examination Report for PCT Serial No. PCT/US02/24859.		
EXAMINER			<p>DATE CONSIDERED 11/19/04</p>

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APPLICANT
Yuehshian T. CHI et al.



FILING DATE
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GROUP
2152

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
✓	4,957,605	09/18/90	Hurwitt et al.			04/17/89
✓	5,240,552	08/31/93	Yu et al.			12/11/91
✓	5,369,544	11/29/94	Mastrangelo			04/05/93
✓	5,444,837	08/22/95	Bomans et al.			12/29/93
✓	5,665,214	09/09/97	Iturralde			05/03/95
✓	5,695,810	12/09/97	Dubin et al.			11/20/96
✓	5,824,599	10/20/98	Schacham-Diamand et al.			01/16/96
✓	5,825,356	10/20/98	Habib et al.			03/18/96
✓	5,831,851	11/03/98	Eastburn et al.			03/21/95
✓	5,838,951	11/17/98	Song			08/28/96
✓	5,859,777	01/12/99	Yokoyama et al.			05/13/97
✓	5,871,805	02/16/99	Lemelson			04/08/96
✓	5,943,550	08/24/99	Fulford, Jr. et al.			03/29/96
✓	6,012,048	01/04/00	Gustin et al.			05/30/97
✓	6,037,664	03/14/00	Zhao et al.			03/31/98
✓	6,059,636	05/09/00	Inaba et al.			07/09/98
✓	6,096,649	08/01/00	Jang			10/25/99
✓	6,100,195	08/08/00	Chan et al.			12/28/98
✓	6,114,238	09/05/00	Liao			05/20/98
✓	6,150,270	11/21/00	Matsuda et al.			01/07/99
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✓	6,226,563 B1	05/01/01	Lim			09/04/98
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✓	6,281,127 B1	08/28/01	Shue			04/15/99
EXAMINER			DATE CONSIDERED 11/19/04			

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U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
✓	6,317,643 B1	11/13/01	Dmochowski			03/31/99	
✓	6,339,727 B1	01/15/02	Ladd			12/21/98	
✓	6,355,559 B1	03/12/02	Havemann et al.			11/03/00	
✓	6,391,780 B1	05/21/02	Shih et al.			08/23/99	
✓	6,417,014 B1	07/09/02	Lam et al.			10/19/99	
✓	6,427,093 B1	07/30/02	Toprac			10/07/99	
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✓	6,580,958 B1	06/17/03	Takano			11/22/99	
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✓	6,609,946 B1	08/26/03	Tran			07/14/00	
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✓	6,630,741 B1	10/07/03	Lopatin et al.			12/07/01	
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FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
✓	EP 0 932 195 A1	07/28/99	EP			X	
✓	EP 1 083 470 A2	03/14/01	EP			X	
✓	GB 2 365 215 A	02/13/02	GB			X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
✓	Sun, S.C. 1998. "CVD and PVD Transition Metal Nitrides as Diffusion Barriers for Cu Metallization." <i>IEEE</i> . pp. 243-246.						
✓	Tagami, M., A. Furuya, T. Onodera, and Y. Hayashi. 1999. "Layered Ta-nitrides (LTN) Barrier Film by Power Swing Sputtering (PSS) Technique for MOCVD-Cu Damascene Interconnects." <i>IEEE</i> . pp. 635-638.						
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✓	Eisenbraun, Eric, Oscar van der Straten, Yu Zhu, Katharine Dovidenko, and Alain Kaloyeros. 2001. "Atomic Layer Deposition (ALD) of Tantalum-Based Materials for Zero Thickness Copper Barrier Applications" (Abstract). <i>IEEE</i> . pp. 207-209.						
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✓	Elers, Kai-Erik, Ville Saanila, Pekka J. Soininen, Wei-Min Li, Juhana T. Kostamo, Suvi Haukka, Jyrki Juhanoja, and Wim F.A. Besling. 2002. "Diffusion Barrier Deposition on a Copper Surface by Atomic Layer Deposition" (Abstract). <i>Advanced Materials</i> . Vol. 14, No. 13-14, pp. 149-153.						
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✓	Van der Straten, O., Y. Zhu, E. Eisenbraun, and A. Kaloyeros. 2002. "Thermal and Electrical Barrier Performance Testing of Ultrathin Atomic Layer Deposition Tantalum-Based Materials for Nanoscale Copper Metallization." <i>IEEE</i> . pp. 188-190.						
✓	Wu, Z.C., Y.C. Lu, C.C. Chiang, M.C. Chen, B.T. Chen, G.J. Wang, Y.T. Chen, J.L. Huang, S.M. Jang, and M.S. Liang. 2002. "Advanced Metal Barrier Free Cu Damascene Interconnects with PECVD Silicon Carbide Barriers for 90/65-nm BEOL Technology." <i>IEEE</i> . pp. 595-598.						
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✓	March 30, 2004. Written Opinion for PCT/US02/19062.						
✓	April 9, 2004. Written Opinion for PCT/US02/19116.						
✓	April 22, 2004. Office Action for U.S. Serial No. 09/998,372, filed November 30, 2001.						
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MAR 30 2004

APPLICANT
Yuehshian T. CHI et al. Technology Center 2100



FILING DATE
November 30, 2000

GROUP
2152

U.S. PATENT DOCUMENTS

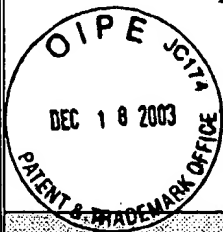
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
/	4,901,218	02/13/90	Cornwell			03/04/88
/	5,427,878	06/27/95	Corliss			05/16/94
/	5,761,065	06/02/98	Kittler et al.			03/30/95
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				FILING DATE November 30, 2000		GROUP 2152	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
/	0 397 924 A1	11/22/90	Europe			X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
/	Rocha, Joao and Carlos Ramos. September 12, 1994. "Task Planning for Flexible and Agile Manufacturing Systems." <i>Intelligent Robots and Systems '94. Advanced Robotic Systems and the Real World, IROS '94. Proceedings of the IEEE/RSJ/GI International Conference on Munich, Germany 12-16 Sept. 1994.</i> New York, New York: IEEE. pp. 105-112.						
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/	March 29, 2002. Office Action for U.S. Serial No. 09/363,966, filed July 29, 1999.						
/	June 20, 2002. Office Action for U.S. Serial No. 09/619,044, filed July 19, 2000.						
/	September 26, 2002. Office Action for U.S. Serial No. 09/637,620, filed August 11, 2000.						
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/	January 23, 2004. International Search Report for PCT/US02/24860.						
/	February 2, 2004. Office Action for U.S. Serial No. 09/363,966, filed July 29, 1999.						
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U.S. PATENT DOCUMENTS

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~	4,207,520	06/10/80	Flora et al.			04/06/78
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✓	4,755,753	07/05/88	Chern			07/23/86
~	5,427,878	06/27/95	Corliss			05/16/94
✓	5,534,289	07/09/96	Bilder et al.			01/03/95
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EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
✓	WO 01/11679	02/15/01	WIPO			X	
~	WO 01/080306	10/25/01	WIPO			X	

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✓	Miller, G. L., D. A. H. Robinson, and J. D. Wiley. July 1976. "Contactless measurement of semiconductor conductivity by radio frequency-free-carrier power absorption." <i>Rev. Sci. Instrum.</i> , Volume 47, No. 7. pp. 799 - 805.
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✓	2000. "Microsense II Capacitance Gaging System." www.adetech.com .

EXAMINER

[Signature]

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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)											
/	El Chemali, Chadi et al. July/August 2000. "Multizone uniformity control of a chemical mechanical polishing process utilizing a pre- and postmeasurement strategy." <i>J. Vac. Sci. Technol.</i> Volume 18, No. 4, pp. 1287 - 1296. ✓										
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/	"NanoMapper wafer nanotopography measurement by ADE Phase Shift." http://www.phase-shift.com/nanomap.shtml . ✓										
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/	"3D optical profilometer MicroXAM by ADE Phase Shift." http://www.phase-shift.com/microxam.shtml . ✓										
/	"NanoMapper FA factory automation wafer nanotopography measurement." http://www.phase-shift.com/nanomapperfa.shtml . ✓										
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